IN THE CLAIMS

1. (currently amended): A process for the synthesis of an oligonucleotide in which an oligonucleotide is assembled on a swellable solid support using the phosphoramidite approach in the presence of a solvent and an activator, wherein the activator is not tetrazole or a substituted tetrazole, the solvent and swellable support being selected such that a swell ratio of from 5 to 20 is achieved, swell ratio being calculated according to the formulas:

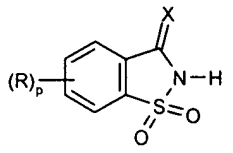
$$\text{Swell Ratio} = \frac{Vol_{final} - Vol_{initial}}{Vol_{initial}}$$

wherein

Vol_{final} is the final volume occupied by the swellable support after full swelling; and

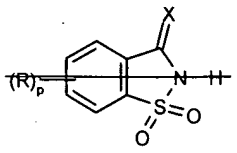
$Vol_{initial}$ is the initial dry bed volume the swellable support.

2. (currently amended): A process according to claim 1, wherein the activator is selected from the group consisting of i) pyridinium[,] salts; ii, imidazolinium ~~and~~ salts; iii) benzimidazolinium salts; iv) benzotriazole; ~~and derivatives thereof; and saccharin or a saccharin derivative~~ v) hydroxybenzotriazole; vi) compounds having the chemical formula (1):



wherein p is 0 or an integer from 1 to 4; X is O or S; and R for each occurrence is a substituent selected from the group consisting of halo groups, aliphatic groups, $-NR^1R^2$, $-OR^3$, $-OC(O)R^3$, $-C(O)OR^3$, cyano, aryl groups, heterocyclyl groups, -CHO, $-COR^3$, $-NHCOR^3$, aralkyl groups, and $-SR^{13}$, wherein R^{11} and R^{12} are each, independently, -H, an aliphatic group, an aryl group, an aralkyl group; or together with the nitrogen to which they are attached form a 5 or 6-membered heterocyclic ring; and R^{13} is an aliphatic group, an aryl group, or an aralkyl group; or two adjacent R groups taken together with the carbon atoms to which they are attached form a six membered saturated or unsaturated ring; and vii) salts formed between a compound of chemical formula (1) and an organic base.

3. (currently amended): A process according to claim 2, wherein the activator ~~has the general chemical formula:~~



~~wherein p is 0 or an integer from 1 to 4;~~

~~R for each occurrence is a substituent, or two adjacent R groups taken together with the carbon atoms to which they are attached form a six membered saturated or unsaturated ring; and~~

~~X is O or S~~ is a compound selected from the (vi) and (vii) compounds.

4. (currently amended): A process according to claim 3, wherein the activator is the N-methylimidazole, pyridine or 3-methylpyridine salt of ~~saccharin~~ a compound of formula (1) wherein X is O and p is 0.

5. (previously presented): A process according to claim 1, wherein the swellable support comprises functionalised polystyrene, partially hydrolysed polyvinylacetate or poly(acrylamide).

6. (previously presented): A process according to claim 1, wherein the process comprises coupling a nucleoside phosphoramidite with a nucleoside or oligonucleotide comprising a free hydroxy group.

7. (original): A process according to claim 6, wherein the nucleoside phosphoramidite is a deoxyribonucleside-3'-phosphoramidite or ribonucleside-3'-phosphoramidite.

8. (previously presented): A process according to claim 6, wherein the nucleoside or oligonucleotide comprising a free hydroxy group comprises a free 5'-hydroxy group.

9. (previously presented): A process according to claim 6, wherein the nucleoside or oligonucleotide comprising a free hydroxy group is attached to the solid support by a cleavable linker.

10. (canceled)

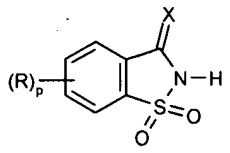
11. (currently amended): A process according to claim ~~10~~ 1, wherein the solvent is ~~acetonitrile,~~ dimethylformamide, N-methylpyrrolidinone, dichloromethane, tetrahydrofuran or pyridine.

12. (previously presented): A process according to claim 1, wherein the assembled oligonucleotide is cleaved from the solid support.

13. (currently amended): A process for the synthesis of an oligonucleotide which comprises coupling a nucleoside phosphoramidite with a nucleoside or oligonucleotide comprising a free hydroxy group in the presence of an activator, wherein:

a) the nucleoside or ~~nucleotide~~ oligonucleotide comprising a free hydroxy group is attached to a swellable solid support by a cleavable linker, said swellable support being selected from the group consisting of functionalized polystyrene, partially hydrolyzed polyvinylacetate and poly(acrylamide);

b) said activator ~~has~~ is a salt formed between an organic base and a compound having the ~~general~~ chemical formula:



wherein p is 0 or an integer from 1 to 4;

R for each occurrence is a substituent[,] selected from the group consisting of halo groups, aliphatic groups, -NR1R2, -OR3, -OC(O)R3, -C(O)OR3, cyano, aryl groups, heterocyclyl groups, -CHO, -COR3, -NHCOR3, aralkyl groups, and -SR13, wherein R11 and R12 are each, independently, -H, an aliphatic group, an aryl group, an aralkyl group; or together with the nitrogen to which they are attached form a 5 or 6-membered heterocyclic ring; and R13 is an aliphatic group, an aryl group, or an aralkyl group; or two adjacent R groups taken together with the carbon atoms to which they are attached form a six membered saturated or unsaturated ring; and X is O or S;

the process employing a solvent which swells the solid support selected from the group consisting of ~~acetonitrile,~~ dimethylformamide, N-methylpyrrolidinone, dichloromethane, tetrahydrofuran and pyridine.

14. (currently amended): A process according to claim 13, wherein the activator is the N-methylimidazole, pyridine or 3-methylpyridine salt of ~~saccharin~~ a compound of formula (1) wherein X is O and p is 0.